

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended): An electric power unit for driving a display unit having, comprising:

a first voltage conversion circuit for stepping up an inputted power supply voltage to generate a first output power supply voltage;

a first multiplicity of buffer circuits for generating, based on said first output power supply voltage, a group of high output voltages ~~(high output voltage group)~~ that are lower than said first output power supply voltage ~~in the order mentioned;~~

~~and a~~ second multiplicity of buffer circuits for generating, based on said first output power supply voltage, a group of low output voltages; ~~(low output voltage group), said electric power unit comprising:~~

a second voltage conversion circuit for stepping down the highest of said group of high output voltages ~~of said high output voltage group~~ to generate a second output power supply voltage that is lower than the lowest of said group of high output voltages ~~of said high output voltage group~~ but higher than the highest of said group of low output voltages ~~of said low output voltage group~~; and

a third voltage conversion circuit for stepping up said inputted power supply voltage to generate a third output power supply voltage that is lower than the lowest of said group of high output voltages ~~of said high output voltage group~~ but higher than the highest of said group of low output voltages ~~of said low output voltage group~~, wherein

each of said first through third output power supply voltages ~~are~~ is provided as ~~the~~ an operating ~~voltages~~ voltage to at least one of said ~~buffers associated with~~ buffer circuits ~~said high output voltage group and low output voltage group~~.

2. (Currently Amended): The electric power unit according to claim 1, wherein

said buffer circuit outputting the highest of said group of high output voltages ~~of said high output voltage group~~ is energized by the first output power supply voltage;

at least other one of ~~other~~ said first multiplicity of buffer circuits ~~associated with said high output voltage group~~ is energized by said first output power supply voltage or the highest of said first group of high output voltages~~[[,]]~~ and by said second output power supply voltage; and

at least one of said second multiplicity of buffer circuits ~~associated with said low output voltage group~~ is energized by said third output power supply voltage and a reference voltage.

3. (Currently Amended): The electric power unit for driving a display unit, comprising:

a first voltage conversion circuit for stepping up an inputted power supply voltage to generate a first output power supply voltage;

a second voltage conversion circuit for stepping down said first output power supply voltage to generate a second output power supply voltage;

a third voltage conversion circuit for stepping up said inputted power supply voltage to generate a third output power supply voltage lower than said second output power supply voltage;

a first buffer circuit to which said first output power supply voltage is provided as its operating voltage;

a second buffer circuit to which said second output power supply voltage is provided as its operating voltage; and

~~a multiplicity of buffer circuits for respectively generating output voltages from said first through third output power supply voltages~~

a third buffer circuit to which said third output power supply voltage is provided as its operating voltage.

4. (Currently Amended): The electric power unit according to claim 3, wherein

[[a]] said first buffer circuit outputting ~~the~~ a highest output voltage of ~~said multiple~~ output voltages is energized by said first output power supply voltage;

~~at least one of~~ said second buffer circuit[[s]] ~~respectively~~ outputting intermediate output voltage[[s]] of said multiple output voltages is energized by said first output power supply voltage or said highest output voltage and by said second output power supply voltage[[;]], and

[[a]] said third buffer circuit outputting ~~the~~ a lowest output voltage of said multiple output voltages is energized by said third output power supply voltage ~~and a reference voltage.~~

5. (Currently Amended): An electric power unit for driving a display unit, comprising:

a first voltage conversion circuit for stepping up an inputted power supply voltage to generate a first output power supply voltage;

a reference voltage generating circuit that generates a first reference voltage, a second reference voltage, a third reference voltage, a fourth reference voltage, and

a fifth reference voltage, ~~and a sixth voltage~~ based on said first output power supply voltage, all said first through fifth reference voltages being lower than said first output power supply voltage ~~in the order mentioned~~;

a first buffer circuit receiving said first reference voltage to generate a first output voltage;

a second buffer circuit receiving said second reference voltage to generate a second output voltage;

a third buffer circuit receiving said third reference voltage to generate a third output voltage;

a fourth buffer circuit receiving said fourth reference voltage to generate a fourth output voltage;

a fifth buffer circuit receiving said fifth reference voltage to generate a fifth output voltage;

a second voltage conversion circuit receiving said first output voltage and stepping down said first output voltage to generate a second output power supply voltage lower than said third output voltage but higher than said fourth output voltage; and

a third voltage conversion circuit for stepping up said inputted power supply voltage to generate a third output power supply voltage lower than said third output voltage but higher than said fourth output voltage, wherein

said first buffer circuit is energized by said first output power supply voltage, ~~and~~

said second buffer circuit is energized by one of said first output power supply voltage ~~or and said first output voltage and as well as~~ by said second output power supply voltage[[:]].

said third buffer circuit is energized by said second output power supply voltage[[:]],

said fourth buffer circuit is energized by said third output power supply voltage[[:]], and

said fifth buffer circuit is energized by said third output power supply voltage ~~and said sixth voltage.~~

6. (Original): The electric power unit according to claim 5, wherein said second voltage conversion circuit is a charge pump-type step-down circuit, while said first voltage conversion circuit and said third voltage conversion circuit are charge pump-type step-up circuits; and

said second output power supply voltage is higher than said third output power supply voltage.

7. (Original): The electric power unit according to claim 6, wherein said first buffer circuit is provided with
a first MOS transistor between nodes of said first output power supply voltage and said first output voltage, and
a first operational amplifier receiving said first reference voltage and first output voltage to generate a control signal to said first MOS transistor;
said second buffer circuit is provided with
a second MOS transistor and a third transistor connected in series between nodes of said first output power supply voltage or first output voltage and said second output power supply voltage, and providing at the node of said second and third MOS transistors said second output voltage,

a second operational amplifier receiving said second reference voltage and second output voltage and outputting a control signal to said second MOS transistor, and

a third operational amplifier receiving said second reference voltage and second output voltage, and outputting a control signal to said third MOS transistor; said third buffer circuit is provided with

a fourth MOS transistor connected between nodes of said third output voltage and second output power supply voltage, and

a fourth operational amplifier receiving said third reference voltage and third output voltage and outputting a control signal to said fourth MOS transistor;

said fourth buffer circuit is provided with

a fifth MOS transistor connected between nodes of said third output power supply voltage and fourth output voltage, and

a fifth operational amplifier receiving said fourth reference voltage and fourth output voltage and outputting a control signal to said fifth MOS transistor,

said fifth buffer circuit is provided with

a sixth MOS transistor and a seventh transistor connected in series between nodes of said third output power supply voltage and sixth voltage and outputting at the node of said MOS transistors and said fifth output voltage,

a sixth operational amplifier receiving said fifth reference voltage and fifth output voltage and outputting a control signal to said sixth MOS transistor, and

a seventh operational amplifier receiving said fifth reference voltage and fifth output voltage and outputting a control signal to said seventh MOS transistor.

8-17. (Canceled)

18. (Currently Amended): A display unit, comprising:
a matrix-type display panel;
a common driver for providing a drive voltage to the common electrodes of said display panel;
a segment driver for providing a signal voltage to the segment electrodes of said display panel; and
an electric power unit for driving said common driver and segment driver, wherein
said electric power unit includes:
a first voltage conversion circuit for stepping up an inputted power supply voltage to generate a first output power supply voltage,
a first multiplicity of buffer circuits for generating, based on said first output power supply voltage, a group of high output voltages (~~high output voltage group~~), and
a second multiplicity of buffer circuits for generating, based on said first output power supply voltage, a group of low output voltages, each of said high output voltages and low output voltages being lower than said first output power supply voltage ~~in the order mentioned~~;
a second voltage conversion circuit for stepping down the highest of said group of high output voltages ~~of said high output voltage group~~ to output a second output power supply voltage lower than the lowest of said group of high output voltages ~~of said high output voltage group~~ but higher than the highest of said group of low output voltages ~~of said low output voltage group~~; and
a third voltage conversion circuit for stepping up said inputted power supply voltage to output a third output power supply voltage lower than the lowest of said group of high output voltages ~~of said high output voltage group~~ but higher than the

highest of said group of low output voltages ~~of side of said low output voltage group~~, wherein

one of said first multiplicity of buffer circuits outputting the highest of said group of high output voltages ~~of said high output voltage group~~ is energized by said first output power supply voltage[;],

at least other one of ~~other~~ said first multiplicity of buffer circuits ~~associated with said high output voltage group~~ is energized by one of said first output power supply voltage ~~or first~~ and the highest of said group of high output voltages ~~and as well as~~ by said second output power supply voltage[;], and

at least one of said second multiplicity of buffer circuits ~~associated with said low output voltage group~~ is energized by said third output power supply voltage ~~and reference voltage~~.

19. (Canceled)